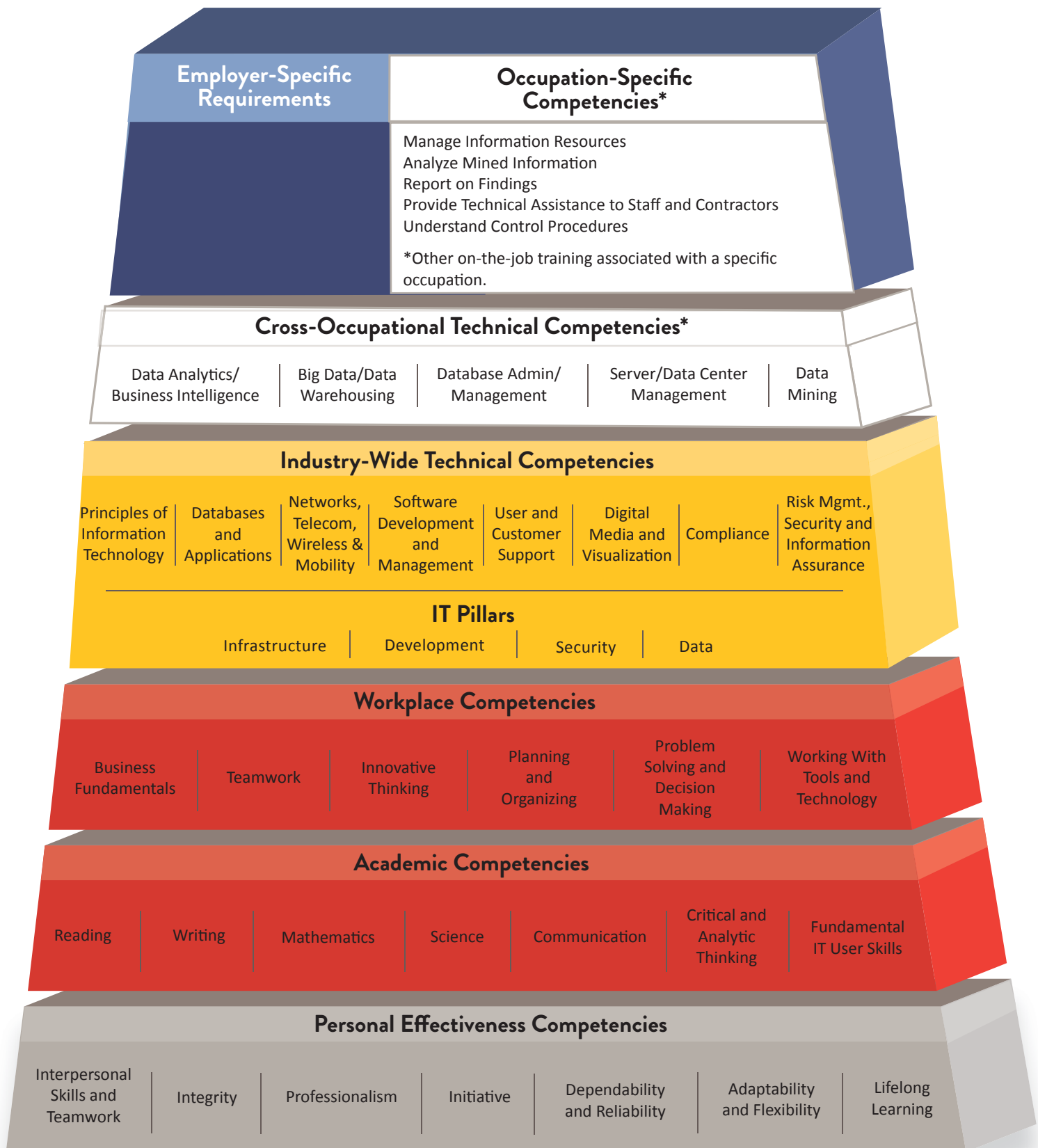


# PIPELINE Program

## Competency Model for Information Technology

### Information Management and Analytics Career Cluster Pathway



Based on: Information Technology Competency Model Employment and Training Administration, U.S Dept. of Labor, September 2012.

\*The PIPELINE Program recommends the Industry-Sector Technical Competencies as formal training opportunities (provided through related instruction) and the Occupation-Specific Competencies as on-the-job training opportunities.

# PIPELINE PROGRAM

INDUSTRY-BASED. EMPLOYER-DRIVEN. DUAL-TRAINING EXPERIENCE.

## Competency Model for Information Management and Analytics Career Cluster Pathway Occupations

### Possible Information Management & Analytics Career Cluster Pathway Occupations

- Administrative Manager
- Agile: Coach/Project Manager/Scrum Master
- Applications Development Manager
- Associate Project Manager
- Audit Director
- Big Data Technical Lead
- Business Analyst
- Business Intelligence: Director/Manager
- Certified Scrum Master
- Change Manager
- Chief Information Officer
- Chief Technology Officer
- Configuration Manager
- Corporate Strategy Manager
- Digital Project Manager
- Director: Information Systems/Information Technology/IT Applications/IT Operations/Operational Consulting/ Program Management/Technical Services/Technology/ Network Management
- Enterprise Architect
- Global Reporting Manager
- Identity & Access Management Project Manager
- Informatics Specialist
- Information Systems Project Manager
- Information Technology: Analyst/Consultant/Coordinator/ Manager/Program Manager/Project Coordinator/Project Manager/Specialist/Security Manager/Technical Lead
- Infrastructure: Manager/Project Manager
- Management Analyst
- Manager: Performance Solutions/Program Manager/ Utilization Management
- MIS: Manager/Specialist
- Modernization Architect - Senior Manager
- Network Manager
- Program Management Director
- Programs Manager
- Project: Administrator/Coordinator/Executive/Lead/ Management Consultant/Manager/Scrum Master
- Release Manager
- Sap Senior Manager Analytics Capability
- Scrum Master: Project Manager/Agile Coach
- Security Manager
- Software: Development Manager/Engineering Manager
- Supply Chain Manager
- Systems Engineer
- Technical: Delivery Manager/Director/Leader/Manager/ Project Manager/Quality Manager/Service Manager
- Technology: Lead/Project manager
- Telecommunications Project Manager
- User Experience Manager
- Vice President of Information Technology
- Web Manager
- *This list is intended to be a guide of potential occupations available within the Information Management & Analytics Pathway. Other position titles may be used based on an employer's organizational structure.*

## Industry-Sector Technical Competencies

- Data Analytics – a set of tools and the process used to inspect, clean, transform, and model data with the goal of discovering useful information, suggesting conclusions, and supporting decision-making.
- Business Intelligence – a set of techniques and tools for the acquisition and transformation of raw data into meaningful and useful information for the purposes of business analysis (sometimes referred to as “data surfacing”).
- Big Data – data sets that are so large or complex that traditional data processing applications are inadequate. Challenges include analysis, capture, data curation, search, sharing, storage, transfer, visualization, querying and information privacy.
- Data Warehousing – a system used for reporting and data analysis; often central repositories of integrated data from one or more disparate sources. Data warehouses store current and historical data and are used for creating analytical reports for knowledge workers throughout the organization.
- Database Administration; Database Management – the use of specialized software to store and organize data. This work may include capacity planning, installation, configuration, database design, migration, performance monitoring, security, troubleshooting, back-up and data record retention.
- Server/Data Center Management – the key tasks associated with protecting data from security breaches
- Data Mining – the computational process of discovering patterns in large data sets involving methods at the intersection of artificial intelligence, machine learning, statistics, and database systems.

## Occupation-Specific Competencies, typically address in on-the-job training

- Manage Information Resources – a cycle of organizational activity, including acquisition, compilation, organization, distribution and disposition through archival or deletion
- Analyze Mined Information – the act of critically reviewing and interpreting information collected from one or more sources
- Report on Findings – the act of interpreting and compiling information to share with end business users and colleagues in the information technology field
- Provide Technical Assistance to Staff and Contractors – the act of providing advanced customer service to end business users and associates
- Understand Control Procedures – demonstrated proficiency and interpretation of controls used to collect, analyze, and protect data

## Possible Information Management & Analytics Career Cluster Pathway Certifications

- MCSE: Microsoft Certified Solutions Expert Business Intelligence
- MCSE: Microsoft Certified Solutions Expert Data Management & Analytics
- CCP Data Scientist: Cloudera Certified Professional
- CCP Data Engineer
- CCA: Cloudera Certified Associate Spark and Hadoop Developer
- CCAH: Cloudera Certified Administrator for Apache Hadoop
- MongoDB Certified DBA, Associate Level
- MongoDB Certified Developer, Associate Level
- Oracle Business Intelligence (BI)

- SAS Certified Data Scientist
- CAP: Certified Analytics Professional
- IIBA – International Institute of Business Analysis
  - ECBA: Entry Certificate in Business Analysis
  - CCBA: Certification of Capability in Business Analysis
  - CBAP: Certified Business Analysis Professional
  - CBATL: Certified Business Analysis Thought Leader
- Associates degree, Bachelor’s degree, Master’s degree in Information Management and Analytics

## IT Information Management and Analytics Career Cluster Pathway Training Plan

	List Course/Training Name and Title	Description of Courses and/or Training Program	List Responsible Provider: Company, College, Trainer, or other	Anticipated Completion Date
<b>Related Instruction Competencies</b>				
Data Analytics				
Business Intelligence				
Big Data/Data Warehousing				
Database Administration; Database Management				
Server/Data Center Management				
Data Mining				
<b>On-The-Job Training Competencies</b>				
Manage Information Resources				
Analyze Mined Information				
Report on Findings				
Provide Technical Assistance to Staff and Contractors				
Understand Control Procedures				